

Appl. No. 10/633,325
Amdt. Date: December 16, 2005
Reply to Office Action of July 20, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) A method of developing muscle mass in a mammal by stimulating, recruiting and mobilizing muscle cells to a specific muscle mass, the method comprising administering nicotine or nicotine acetylcholine receptor agonist (nAChR) to a mammal in an amount sufficient combined with exercise to increase said specific muscle mass.
2. (original) The method of claim 1 wherein the muscle cells are differentiated from stem cells.
3. (original) The method of claim 2 wherein the stem cells are endogenous.
4. (canceled)
5. (currently amended) The method of claim 1 wherein ~~exercise causes the muscle mass to exceed the cell replenishing effects of a normal life style~~ muscle cells are recruited to said specific muscle mass in response to exercise of said specific muscle mass.
6. (currently amended) The method of claim 5 wherein ~~the physiologic response to the exercise cause~~ stimulate the muscle cells of the said specific muscle mass to express nicotinic acetylcholine receptors.
7. (original) The method of claim 6 including the step of using nicotine or a nAChR agonist to bind said nicotinic acetylcholine receptors.
8. (currently amended) The method of claim 7 wherein said binding stimulates the release of growth factors, including human growth hormone (HGH), vascular endothelial growth factor (VEGF), basic fibroblast growth factors (bFGF) and other chemokines, cytokines and attractants

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to stem cell recruitment, migration and mobilization ~~at the target physiologic tissue or muscle mass~~ said specific muscle mass.

9. (currently amended) The method of claim 8 wherein said stem cells differentiate into the phenotype of ~~the mobilized~~ said specific muscle mass ~~or physiologic tissue~~.

10. (currently amended) The method of claim 5 wherein exercise ~~causes an abnormal physiologic response in the muscle group thereby causing~~ stimulates said specific muscle mass to release of various metabolic, catecholamine, metabolites, catecholamines, cytokines, chemokines, and/or cause an inflammatory response to further enhance the increase of tissue mass in said specific muscle mass.

11. (currently amended) The method of claim 1 wherein the nicotine or nicotine acetylcholine receptor agonist (nAChR) is administered in an amount sufficient to produce increased thermogenesis.